## AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for evaluating the morphogenic activity of a candidate morphogenic protein or analog thereof, comprising:

- (a) creating a local defect site in a mammal accessible to progenitor cells,
- (b) administering said candidate morphogenic protein or analog <u>thereof</u> systemically to said mammal at a site distal from the local defect site,
- (c) measuring the ability of <u>said</u> candidate <u>morphogenic</u> protein or <u>analog thereof</u> to induce new tissue formation at said defect site, and
- (d) comparing the ability of said candidate <u>morphogenic protein or analog thereof</u> with the ability of a control to perform the same function,

wherein said local defect site is in renal, skeletal, lung, cardiac, liver, pancreas, uterine, ovarian, gastrointestinal, colon, dermal, <del>oral mucosa</del>, osteochondral, chondral, or thyroid tissue.

## 2. (Canceled)

- 3. (Currently amended) A method for evaluating an optimal dosage of a candidate morphogenic protein or analog thereof for administering to a mammal, comprising:
  - (a) creating a local defect site in a mammal accessible to progenitor cells,
  - (b) administering said candidate morphogenic protein or analog <u>thereof</u> systemically to said mammal at a site distal from the local permissive defect site,
  - (c) measuring the ability of candidate <u>morphogenic</u> protein or analog <u>thereof</u> to induce new tissue formation at said defect site, and
  - (d) comparing the ability of said candidate <u>morphogenic protein or analog thereof</u> with the ability of a control to perform the same function,

wherein said local defect site is in renal, skeletal, lung, cardiac, liver, pancreas, uterine, ovarian, gastrointestinal, colon, dermal, <del>oral mucosa,</del> osteochondral, chondral, or thyroid tissue.

## 4. (Canceled)

5. (Withdrawn) The method of claim 1 or 3, wherein said non-neuronal defect site occurs in skeletal, lung, cardiac, liver, pancreas, uterine, ovarian, gastrointestinal, colon, dermal, oral mucosa, osteochondral, chondral, or thyroid tissue.

- 6. (Previously presented) The method of claim 1 or 3, wherein said defect site occurs in renal tissue.
- 7. (Previously presented) The method of claim 1 or 3, wherein said defect site occurs in dental or periodontal tissue.
- 8. (Previously presented) The method of claim 1 or 3, wherein said mammal is aged.
- 9. (Previously presented) The method of claim 1 or 3, wherein said mammal has a reduced capacity to induce callus formation.
- 10. (Previously presented) The method of claim 1 or 3, wherein said mammal is afflicted with impaired blood flow to the skeletal extremities.
- 11. (Currently amended) The method of claim 1 or 3, wherein said mammal has a reduced capacity to induce an endogenous morphogenetic morphogenic signal.
- 12. (Currently amended) The method of claim 1 or 3, wherein <u>said</u> morphogenic protein or analog ther<u>eof</u> is administered parenterally.
- 13. (Currently amended) The method of claim 12, wherein <u>said</u> morphogenic protein or analog <u>thereof</u> is administered intravenously.
- 14. (Currently amended) The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered orally.
- 15. (Currently amended) The method of claim 1, wherein said morphogenic protein or analog thereof is administered to said mammal at a time when mesenchymal progenitor cells are accessible to said defect locus local defect site.
- 16. (Currently amended) The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered at least six hours after the creation of said <u>local</u> defect <u>site</u>.

17. (Currently amended) The method of claim 1, wherein said morphogenic protein or analog thereof is administered at least 24 hours after the creation of said <u>local</u> defect <u>site</u>.

- 18. (Currently amended) The method of claim 1, wherein said morphogenic protein or analog thereof is administered at least 72 hours after the creation of said <u>local</u> defect <u>site</u>.
- 19. (Currently amended) The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered to said mammal after the initiation of fibrosis at said defect locus local defect site.
- 20. (Currently amended) The method of claim 1 or 3, wherein said morphogenic protein or analog thereof is administered in aqueous solution.
- 21. (Previously presented) The method of claim 8, wherein said mammal is a steroidal drug user.
- 22. (Previously presented) The method of claim 8, wherein said mammal is aged, obese, hypertensive, or afflicted with osteopenia or diabetes.
- 23. (**Previously presented**) The method of claim 1 or 3, wherein said morphogenic protein is a morphogenically active amino acid sequence variant of a morphogen selected from: OP1, OP2, OP3, BMP2, BMP3, BMP4, BMP5, BMP6, BMP9, BMP-10, BMP-11, BMP-12, BMP-15, BMP-3b, DPP, Vg1, Vgr-1, 60A protein, GDF-1, GDF-3, GDF-5, GDF-6, GDF-7, GDF-8, GDF-9, GDF-10, or GDF-11.
- 24. (Previously presented) The method of claim 23, wherein said morphogen is selected from: OP1, OP2, BMP2, BMP4, BMP5, or BMP6.
- 25. (Previously presented) The method of claim 1 or 3, wherein said morphogenic protein is a morphogenically active amino acid sequence variant of a morphogen comprising an amino acid sequence having at least 70% homology within the C-terminal 106 amino acids, including the conserved seven cysteine domain, of human OP1.
- 26. (Previously presented) The method of claim 1 or 3, wherein said morphogenic protein is OP1.

27. (**Previously presented**) The method of claim 1 or 3, wherein said morphogenic protein is mature OP1 solubilized in a saline solution.

- 28. (Previously presented) The method of claim 1 or 3, wherein said morphogenic protein comprises an amino acid sequence defined by OPX (SEQ ID No. 3); Generic Sequence 6 (SEQ ID No. 4), Generic Sequence 7 (SEQ ID No. 5); Generic Sequence 8 (SEQ ID No. 6); or Generic Sequence 9 (SEQ ID No. 7).
- 29. (Withdrawn) A method for inducing new tissue formation at a nonskeletal defect locus in a mammal, comprising administering morphogenic protein systemically to said mammal.

30-75. (Canceled)

76. (Withdrawn) A method for inducing bone or cartilage formation at a defect locus in a mammal, comprising administering osteogenic protein systemically to said mammal.

77-122.(Canceled)